

We claim:

1. A method for assaying DNA primase activity comprising contacting a nucleic acid template, a DNA primase, and ribonucleoside triphosphates; polymerizing the triphosphates to form RNA; and detecting the RNA with a fluorescent marker that binds RNA.
2. The method of claim 1, wherein the fluorescent marker is added before polymerization.
3. The method of claim 1, wherein the fluorescent marker is added after polymerization.
4. The method of claim 1, wherein the DNA primase is bacterial.
5. The method of claim 4, wherein the DNA primase is selected from *E. coli* DNA primase, *S. pneumoniae* DNA primase, *S. aureus*, and *H. influenzae* DNA primase.
6. The method of claim 1, wherein the fluorescent marker is selected from SYBR Green II, RiboGreen, and YO-PRO-1.
7. The method of claim 1, wherein the nucleic acid template is selected from SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and SEQ ID NO:8.
8. The method of claim 1, wherein the assay is carried out in the presence of helicase.
9. The method of claim 1, wherein the RNA is separated from the nucleic acid template prior to detection.
10. The method of claim 1, wherein the detecting is accomplished by measuring fluorescence intensity.
11. A method for identifying compounds that modulate DNA primase activity comprising contacting a nucleic acid template, a DNA primase, and ribonucleoside triphosphates, with a test compound;

polymerizing the triphosphates to form RNA;

binding a fluorescent marker to the RNA; and

detecting a fluorescent signal, wherein a change in the fluorescent signal in the presence of said compound as compared with the fluorescent signal in the absence of said compound indicates that said compound modulates DNA primase activity.

12. The method of claim 11, wherein the fluorescent marker is added before polymerization.

13. The method of claim 11, wherein the fluorescent marker is added after polymerization.

14. The method of claim 11, wherein the DNA primase is bacterial.

15. The method of claim 14, wherein the DNA primase is selected from *E. coli* DNA primase, *S. aureus* DNA primase, *S. pneumoniae* DNA primase, and *H. influenzae* DNA primase.

16. The method of claim 11, wherein the fluorescent marker is selected from SYBR Green II, RiboGreen, and YO-PRO-1.

17. The method of claim 11, wherein the nucleic acid template is selected from SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and SEQ ID NO:8.

18. The method of claim 11, wherein the assay is carried out in the presence of helicase.

19. The method of claim 11, wherein the RNA is separated from the nucleic acid template prior to detection.

20. The method of claim 11, wherein the detecting is accomplished by measuring fluorescence intensity.